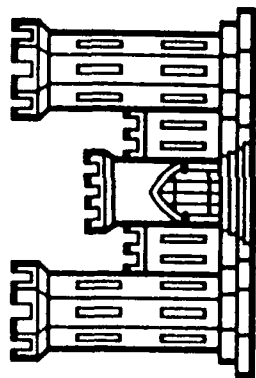


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U.S. Army Corps of Engineers Library Study

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Prepared for:

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Executive Summary

Introduction

A recent report issued by M.I.T., The Corporation of the 1990's, states that information and the way information is managed within an organization, will be key components of an organization's success. Mitchell Systems Corporation (MSC) was engaged by the U.S. Army Corps of Engineers (USACE) to review their libraries in planning for the future of this segment of the USACE Information Management program. Dr. James M. Matarazzo, Professor, Simmons College Graduate School of Library and Information Science, and Mr. Frank H. Spaulding, formerly Manager, Library Network Services, AT&T Bell Laboratories, assisted MSC with this study.

Specifically, MSC was asked to collect information, analyze this information, and make recommendations for consideration for future actions.

The material for this study was gathered by

- Interviews with 50 library representatives.
- Site visits to 9 USACE libraries in 5 different locations.
- Interviews with the Director or Chief of Information Management at each site visited.
- Development of comparative data with a number of firms in industry.

Executive Summary

Findings - Libraries

- The libraries of the USACE are focused on acquiring and organizing information, while comparable industrial firms' libraries spend much more time providing users with defined services.
- The USACE libraries have very small staffs and fiscal resources in almost all locations when compared to industrial firms.

Findings - Services

- USACE libraries know that developing and delivering effective services are the most valuable activities they can provide.
- There is little evidence of local marketing efforts to make users aware of the current and planned services and resources of the library.
- Some USACE libraries are heavily used, while others are used infrequently.

Findings - Use of Technology

- There has been very good use of technology for library functions and in support of some services in the USACE to date.
- The USACE library database has been highly successful.

Findings - Management

- Management expects that the libraries will exploit technology for the benefits it can contribute to productivity.
- Information Managers express support for creating state-of-the-art, electronic libraries.
- There is strong management support for the libraries at USACE headquarters.

Executive Summary

Recommendations - Libraries

- Centralize the various library functions - ordering of materials, cataloging, and interlibrary loan - so that the librarians will be more able to work directly on meeting user needs.
- Merge libraries no longer in demand to support the technical missions of the USACE with the next closest library.

Recommendations - Services

- Staff all library units with quality professional librarians.
- Marketing of the library services and resources must receive a high priority at the local level.

Recommendations - Use of Technology

- Provide for future development of the USACE library systems.
- Insure that USACE libraries play a larger role in moving information through the new open system architecture.

Recommendations - Management

- Strengthen the strategic alliance between the libraries and the mission of the USACE.
- Enhance the management of the libraries at headquarters through the development of a library council.

I. Introduction and Methodology

Introduction and Methodology

MSC was engaged by the USACE to assist in a program of continuous evaluation of the libraries of the USACE. The specific objectives of this study were to:

- Conduct a survey of all USACE libraries in the United States.
- Identify the USACE's needs for other technologies.
- Identify new products and services to be offered by the USACE libraries.
- Review the USACE libraries with an eye toward the provision of maximum customer service.
- Compare the USACE library program with data obtained by secondary research on similar operations in industry.
- Consider the results of these findings and comparisons and have the consultants, Dr. James M. Matarazzo and Mr. Frank A. Spaulding, apply their 50 plus years of experience to the issues identified.

Conduct of the Study

- Telephone interviews with 50 library representatives at each of the USACE libraries in the continental United States.
- Site visits to nine USACE libraries in five geographic locations.
- Interviews with the Director or Chief of Information Management at each site visited.
- Development of comparative data of 14 industrial firms which contain 46 library units.

Library Survey for the U.S. Army Corps of Engineers

MSC interviewed library representatives at all USACE library sites in the United States by telephone. The following questions were asked of all respondents.

- Why was the library initially established?
- How is library service organized?
- How many people (FTE's) are providing library service?
- What criteria do you use in evaluating the library's impact on the organization?
- Who are the main user groups of the library?
- What types of information supplied by the library does the organization find the most valuable?
- What library services add the most value?
- What is the value of the library in the following categories:
 - Developing effective services
 - Delivering effective services
 - Responding to changing needs
 - Masking the staff more productive
 - Controlling information expenditures
- What trends do you see in USACE libraries through 1994 in terms of staffing, budgets, computer applications, library size, and general impact on operations?

The results of the 1991 survey of USACE libraries, the site visit, the discussions with the Director/Chief of Information Management and the comparisons with the industrial firms' libraries are contained in the findings section of this report.

II. Findings and Conclusions

Findings and Conclusions - Libraries

- The libraries of the USACE are focused on acquiring and organizing information, while comparable industrial firms' libraries spend much more time providing users with defined services.
- The USACE libraries have very small staffs and fiscal resources in almost all locations when compared to industrial firms.

The libraries of the USACE were initially established to acquire and organize information. With very small staffs, these libraries focus on the same specific functions today, leaving little if any time for direct service to users. The time involved in the acquisition, cataloging and the filling of a large number of requests for interlibrary loan casts the library in the light of a "warehouse" rather than a service provider. These activities, while important, consume a disproportionate amount of the time of USACE librarians in absolute terms, and especially relative to their peers in the private sector. Private sector librarians in our survey (see Appendix I) have more time to disseminate information and for the analysis of information than do USACE librarians. Serious consideration, then, must be given to releasing the service providers from the time-consuming and low value-added tasks of ordering and cataloging. The provision of direct service to users should be the current goal of all USACE librarians.

The use of all libraries must be monitored since user populations and missions change over time; often in today's economy such changes often happen at an accelerated pace. Libraries are expensive to maintain and their cost ought to be related to their use and the value received. We believe that this study reveals that some economies can be achieved by the merger of some libraries and, at the same time, users can receive the services needed from a stronger, larger, and better library service unit.

Findings and Conclusions - Services

- USACE librarians know that developing and delivering effective services are the most valuable activities they can provide.
- There is little evidence of local marketing efforts to make users aware of the current and planned services and resources of the library.
- Some USACE libraries are heavily used, while others are used infrequently.

The USACE needs a group of professionals who spend the bulk of their time disseminating information and meeting user needs by assistance with reference and research requests. The goal is to increase the number of users who will attest to the impact of library services on their work. An increase in professional staff requires provision for maintaining and strengthening the existing continuing education program.

The poster and brochure provided by headquarters is the beginning of a needed campaign to market library services. Marketing has become even more important in the past few years for all librarians since resources have been more scarce and senior management is forced to evaluate carefully every expenditure. The USACE users - current and potential - have a right to know about and to be updated on new services provided by the libraries on a systematic basis. As noted in the 1988 Library User Survey, many users (45%) learn about library services by word of mouth.

The use of any service unit is proof that it is providing value for the funds spent to provide the services. This relationship between use and funding is also confirmed in a newly published book by Special Libraries Association, entitled Corporate Library Excellence. Quality library programs ought to meet a USACE agreed upon standard which includes not only frequency of use, but also leverages resources and services. These standards provide a benchmark for those libraries operated under contract. With such standards, all members of the USACE who require library and information resources would have access to a specified level of service and material assistance.

Findings and Conclusions - Use of Technology

- There has been very good use of technology for library functions and in support of some services in the USACE libraries to date.
- The USACE Corporate Library Database has been highly successful.

This study reveals that the USACE use of technology has been very good. Technology has been used to support acquisitions, cataloging, circulation, access to the online catalog, and to provide use of online information retrieval systems. Recently, technologies have also been used to provide on site access to CD Rom databases and the use of LANs.

A commitment to the continuous maintenance of the USACE library database is essential. In order to maximize resources in an era of declining budgets, the library network must have automation standards, training standards and open system access.

In the long term, this database should be augmented with material in full text which is very important to the USACE technical missions. While it may not be practical or possible to augment the database at this time, plans should be advanced now in preparation when these full text-databases can be added. The enlarged database ought to be made available through the open systems architecture of the USACE so that each user can access the database at his/her work station. This access is especially important since most libraries in the USACE are centralized, while the users are geographically dispersed. Such access will also help place USACE libraries in the communications mainstream of the organization.

Findings and Conclusions - Management

- Management expects that the libraries will exploit technology for the benefits it can contribute to productivity.
- Information Managers expressed support for creating state-of-the-art electronic libraries.
- There is strong management support for libraries at USACE headquarters.

The Information Managers of the USACE appear to be supportive of even greater use of technology in the efforts to develop state-of-the-art electronic libraries. This is very significant since management support is the key and most important ingredient in the most successful libraries in the nation. In a survey of the thirteen best corporate and industrial libraries in the United States, published by Special Libraries Association in 1990, management support and belief in its libraries was the most important factor in these most successful of libraries. These libraries are also shown to understand and support the strategy and mission of the firms served.

The management of any network of libraries is difficult. The management of a network of essentially independent libraries is especially difficult and extremely complex. The leadership required to accomplish this task is acknowledged at the staff level. However, much of what needs to be accomplished must be done so in climate where costs have to be reduced and services provided need to be increased. We plan to recommend a solution to what we see as an opportunity to continue the process to make the USACE libraries system one which will flourish in the 1990's.

Finally, regular evaluation of the USACE library must continue as in the past. The cost of the USACE libraries must be shown to equal the value received. The Annual Report of the USACE Library Program for fiscal year 1990, and the Library User Survey: Report of Results of 1988 are key management tools in a program of continuous evaluation. These reports and others in the future must assist in establishing the value of the library program on a regular basis.

III. Recommendations

The following eight recommendations are critical to the improvement of the USACE's library information program. They recognize a need to do more while holding costs at the same level. These recommendations are based upon the findings of this study and are grouped in the categories: Libraries, Services, Use of Technology, and Management.

Recommendations - Libraries

- *Centralize the various library functions - ordering of materials, cataloging, and interlibrary loan - so that the librarians will be more able to work directly on meeting user needs.*

This arrangement will provide the requisite time of staff to provide enhanced information services locally and will provide reduced costs by aggregating the time and monies now spent locally on processing activities. Centralized processing activities may be positioned in the larger R & D library centers; in independent regional nodes; or in commercial centers.

- *Merge libraries no longer in demand to support the technical missions of the USACE with the next closest library.*

All libraries should have resources to meet primary information needs. Serious consideration should be given to regionalization of resources for District and Division libraries that meet secondary or tertiary information needs.

Improved collection development of information resources by both acquisition of new information and purging of obsolete information will reduce excessive use of space now occupied by the libraries and provide a more relevant and useful body of knowledge. This requires a strong selection policy and procedures based upon USACE information needs and uses.

Recommendations - Services

- *Staff all library units with quality professional librarians.*

Library units should work with local personnel offices to improve position descriptions and regulations to ensure a better level of staffing and performance. USACE sites should take advantage of HQUSACE Program Manager for the development of position descriptions, statements of work, and other criteria for the provision of library services.

- *Marketing of the library services and resources must receive a high priority at the local level.*

An on-going active marketing program of resources and services will help library and upper management evaluate better the appropriateness of its resources and services. A focused marketing program will support the discontinuance of non-used resources and services and provide a basis for new, value-added services within the finite resources available.

Two new services that will improve USACE productivity are: (1) an online electronic request system for all USACE employees to receive library/information services, and (2) an online bulletin board for new and relevant information that is subject-focused and available to all USACE staff.

Recommendations - Use of Technology

- *Provide for the future development of the USACE library system.*

The present USACE libraries must continue to develop a successful network by adherence to automation standards and by provision for standards of training to insure that the networks will be compatible with the USACE open systems architecture.

A high priority should be given by management to the emerging use of optical disc technology to provide information resources in full text, online and available to all.

- *Insure that USACE libraries play a larger role in moving information through the new open system architecture.*

Libraries are a part of information management at each location. However, the libraries role is the provision of bibliographic information at present. The planning of new information systems should include the librarians who are professionally trained to move and manage information through an organization's infrastructure.

Recommendations - Management

- *Strengthen the strategic alliance between the libraries and the mission of the USACE.*

The USACE is in the engineering and construction business and the libraries can be an integral part of this business as they shape their resources and services in full support of the USACE's business. In order to do this effectively, management must alert and involve library management of new projects and concerns in order that the librarians may become information proactive rather than the present state for many of being information reactive. USACE librarians should be knowledgeable and active members of the location's technical and information management teams. Information management is a partnership.

The libraries should be managed as an information service business. The librarians should have commensurate authority and responsibility to manage the business in support of the organization's mission.

- *Enhance the management of the libraries at headquarters through the development of a library council.*

The USACE libraries need a more cohesive management and direction to provide quality control of information services and systems. The present semi-autonomous mode of operation for each library, even with regulations to guide their resources and services, does not work effectively. A single manager or a council of representative managers, with line operation authority and responsibility will greatly aid the availability and quality of relevant information services, systems and staff.

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Arno Penzias, Vice President of AT&T Bell Laboratories, stated in his recently published book, Ideas and Information, "A healthy flow of (relevant) information separates winning organizations from losers."

With excellent support by management for enhanced involvement of the libraries in the USACE business and their encouraging use of all possible technologies to move and manage information, the USACE libraries can achieve excellence with greater use of sound and practical techniques and practices here recommended.

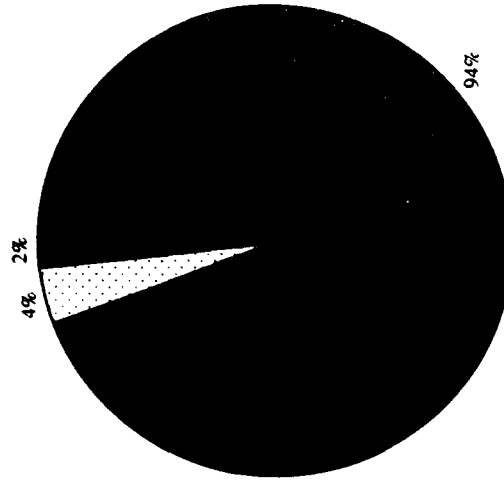
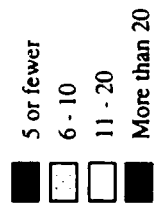
## Appendix I

The following tables contain the results of telephone interviews with representatives of 50 USACE libraries. Next to these tables are the results of a telephone survey of the librarians of 14 industrial firms who were asked essentially the same questions. The 14 industrial firms contain 46 library units and are comparable because of the industries represented. The USACE library representatives were asked an additional set of questions which are represented in the last table.

The USACE libraries are compared with the libraries in the following 14 firms: Allied-Signal, Inc.; Archer-Daniels-Midland Co.; Bethlehem Steel Corp.; The Boeing Company; Combustion Engineering, Inc.; Fluor Daniel, Inc.; General Motors Corp.; Ingersoll-Rand Co.; Lockheed Corp.; Minnesota Mining & Manufacturing Co.; Morrison-Knudsen Co., Inc.; Rockwell International Corp.; TRW, Inc.; and Union Carbide Corp.

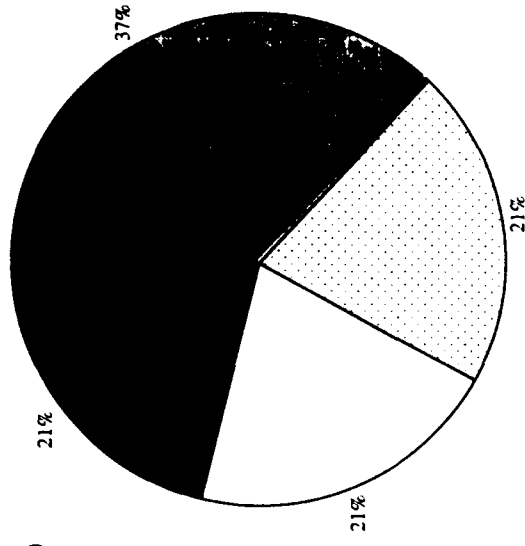
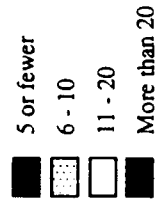
## USACE Library Survey 1991

How many people (FTE) are providing library services?



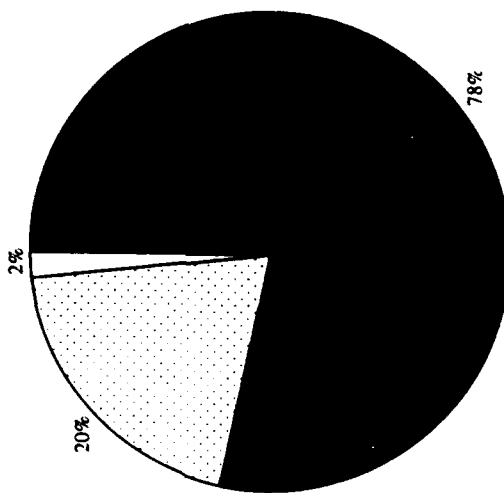
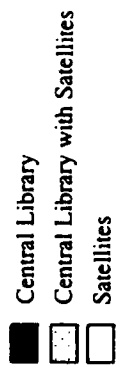
## 14 Benchmarked Libraries

How many people (FTE) are providing library service?



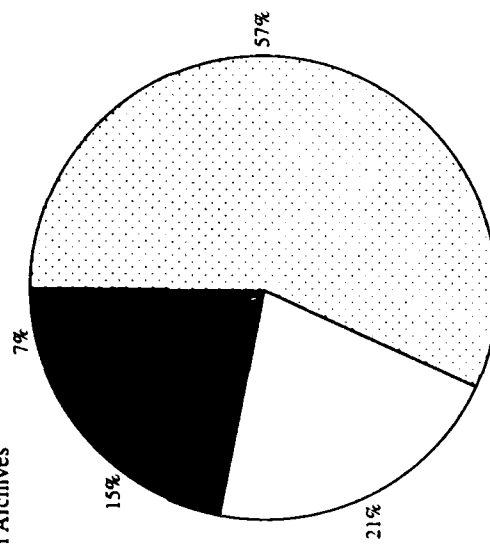
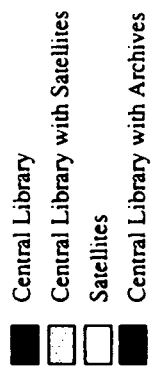
## USACE Library Survey 1991

How is the library service organized?



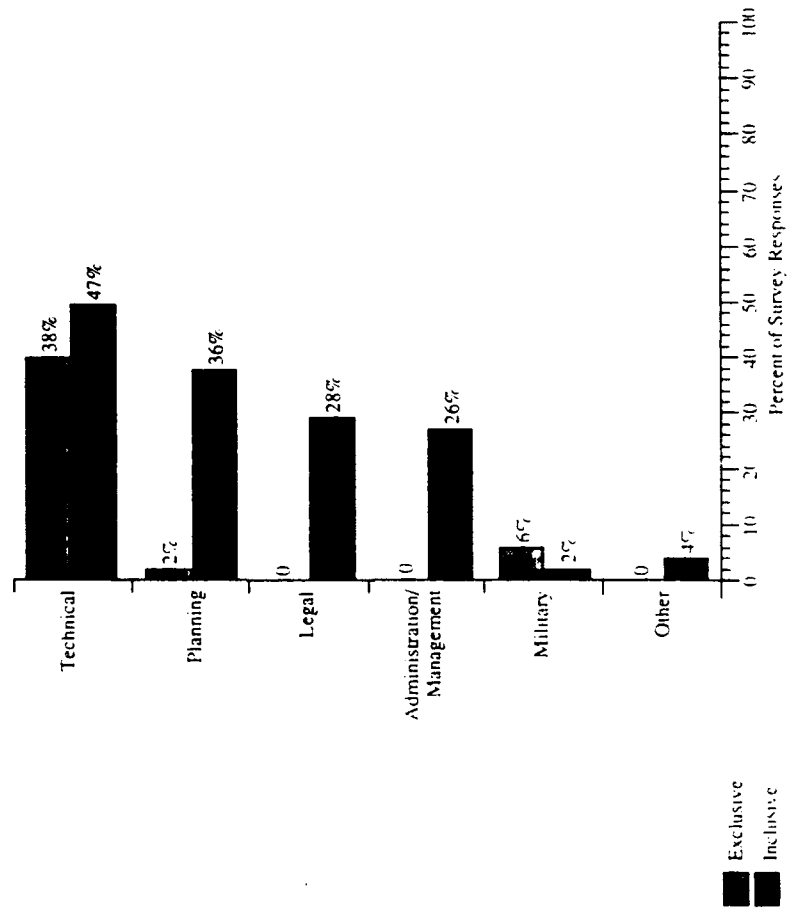
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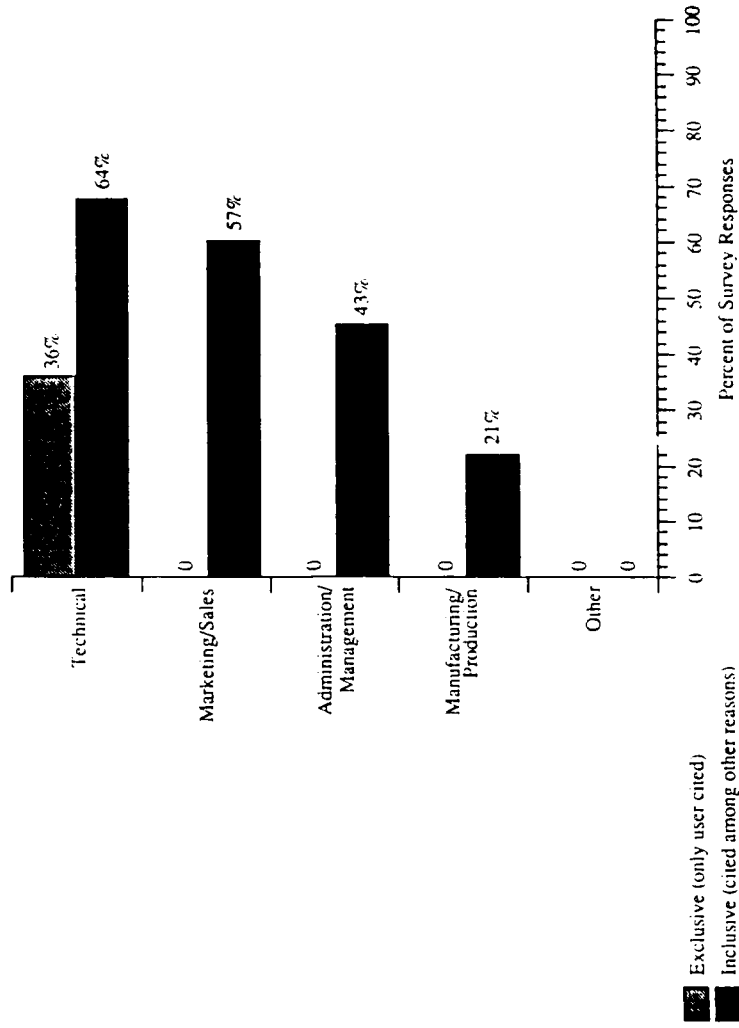
## USACE Library Survey 1991

Who are the main user groups of the library?



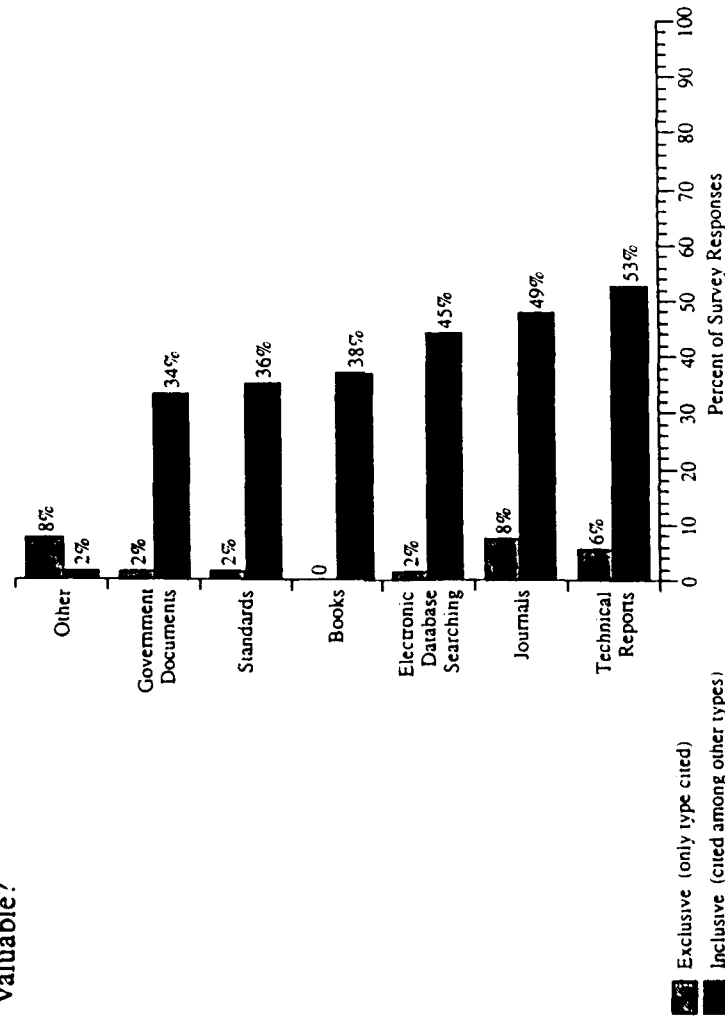
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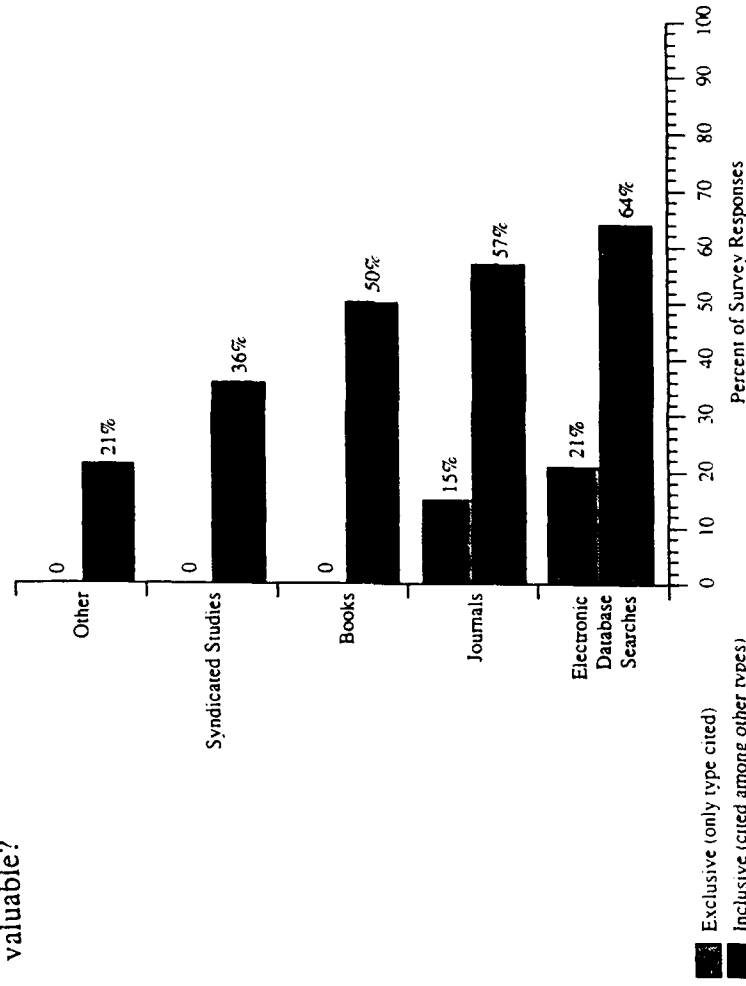
## USACE Library Survey 1991

What types of information supplied by the library does the organization find most valuable?



## 14 Benchmarked Libraries

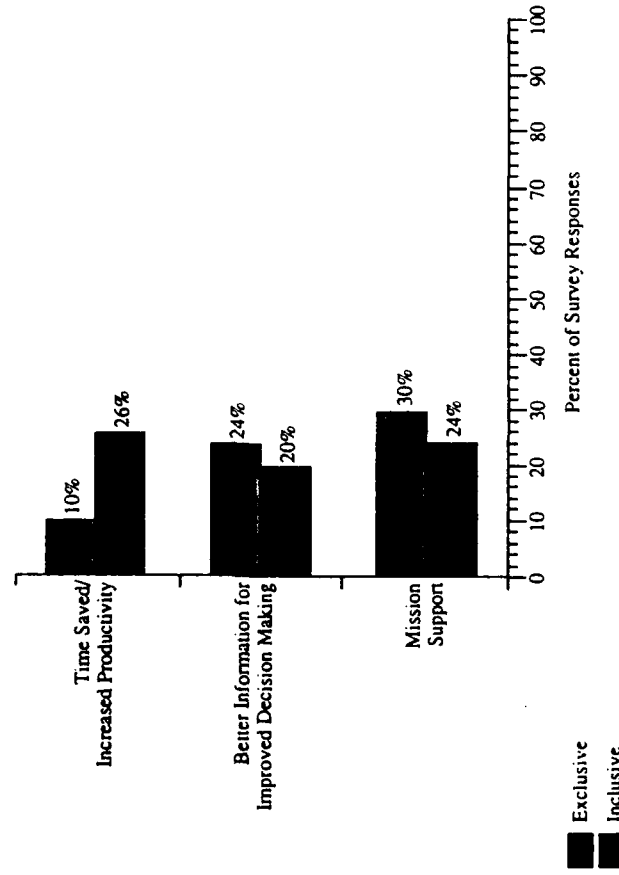
What types of information supplied by the library does the firm find most valuable?





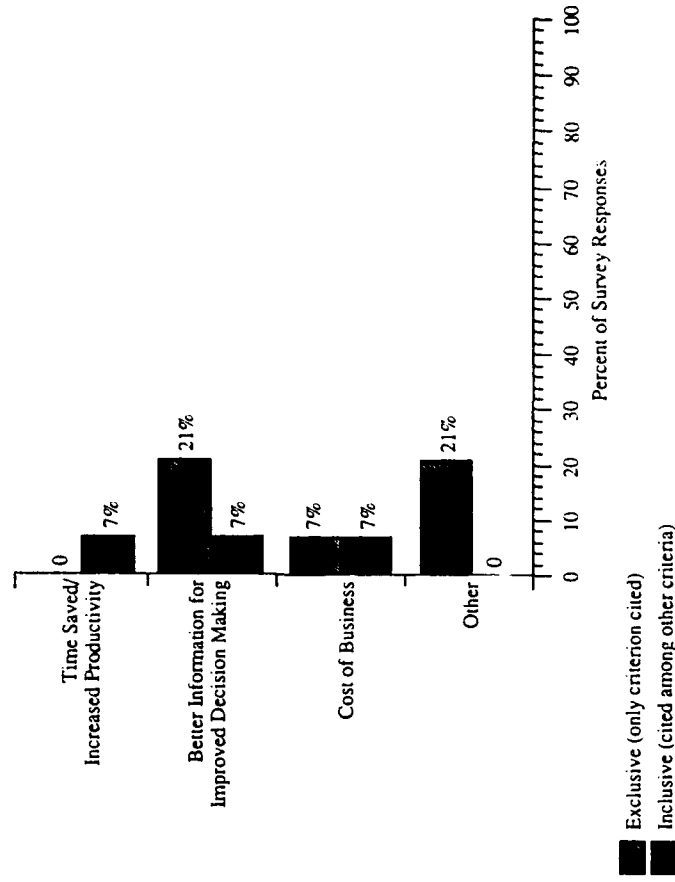
## USACE Library Survey 1991

What criteria do you use in evaluating the library's impact on the organization?



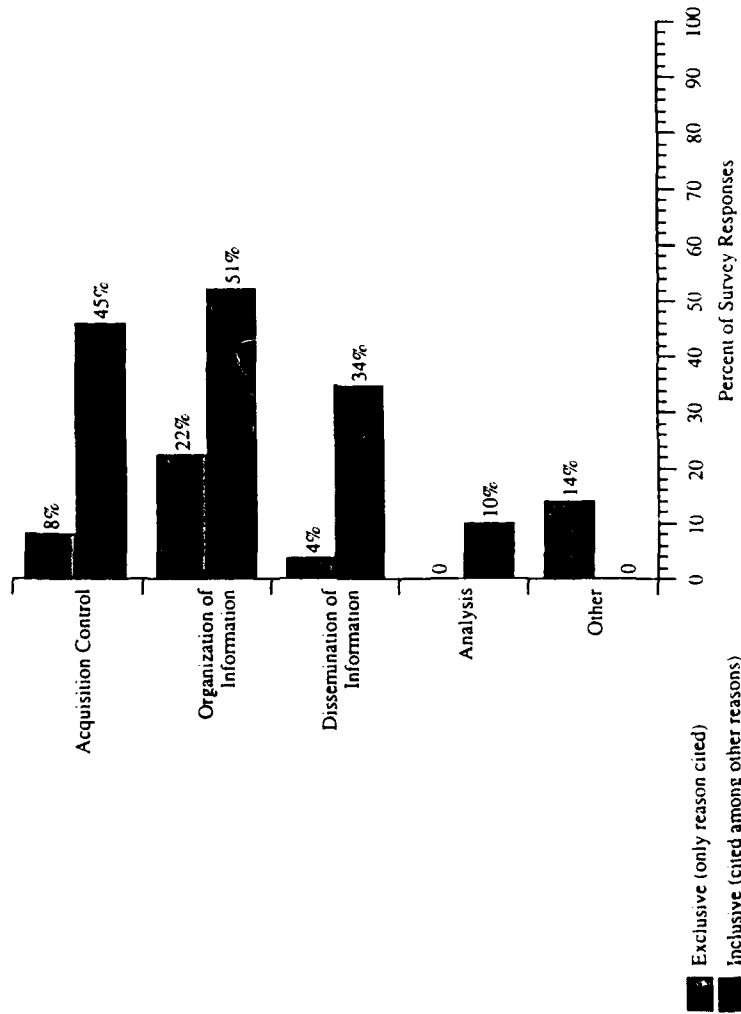
## 14 Benchmarked Libraries

What criteria do you use in evaluating the library's impact on the firm?



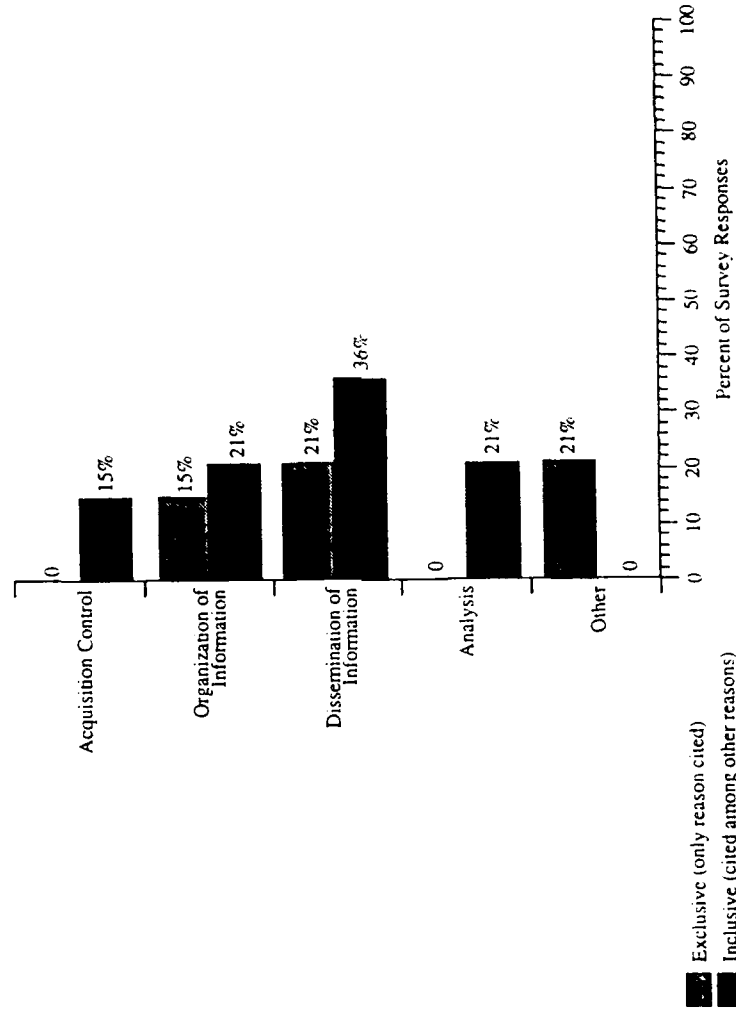
## USACE Library Survey 1991

Why was the library initially established?



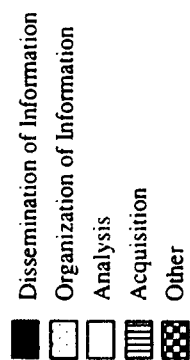
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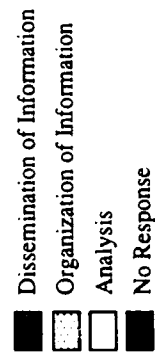
## USACE Library Survey 1991

What library services add the most value?



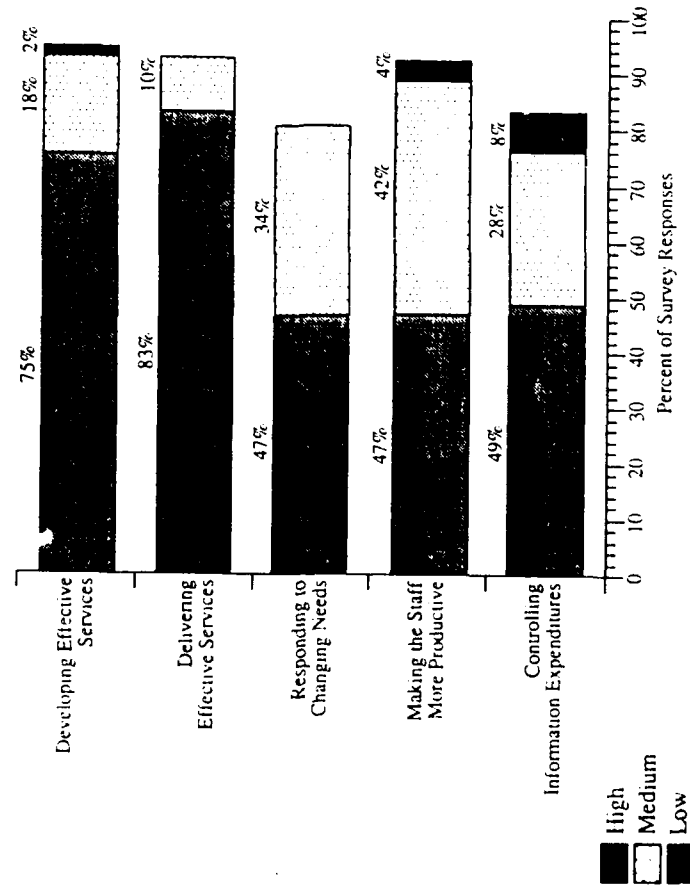
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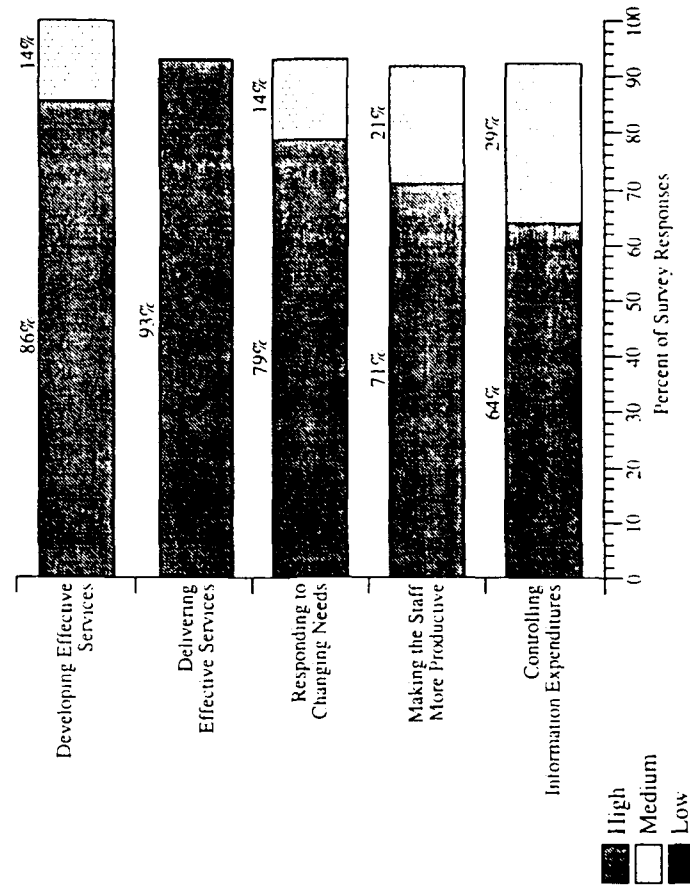
## USACE Library Survey 1991

What is the value of the librarian in the following categories?



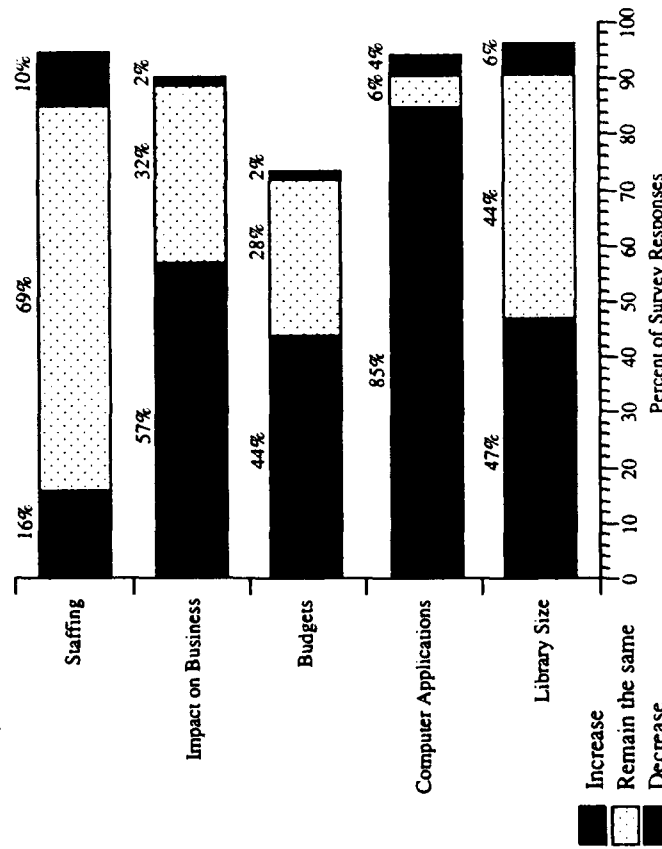
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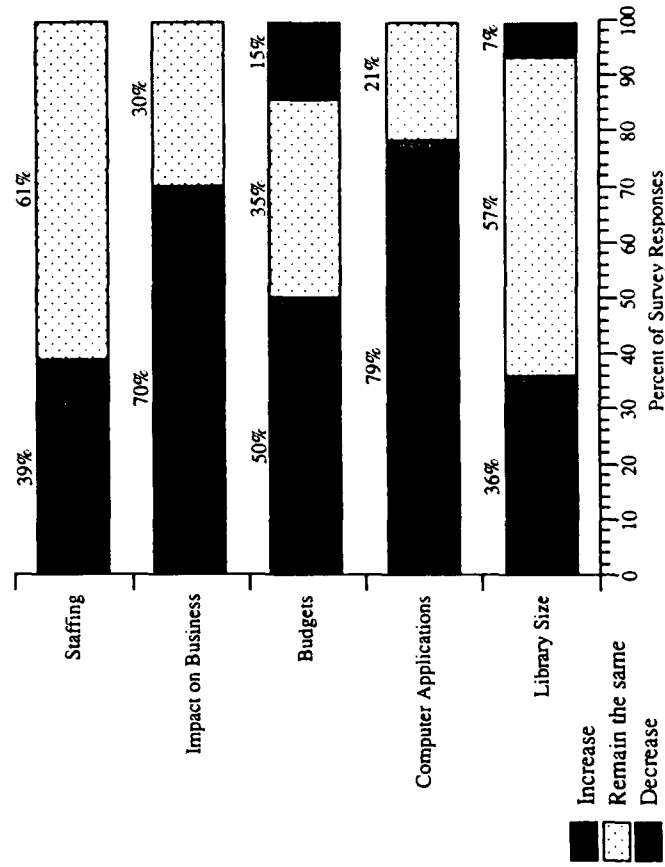
## USACE Library Survey 1991

What trends do you see in Corps libraries through 1994 in terms of staffing, budgets, computer applications, library size, and general impact on the operations of the Corps?



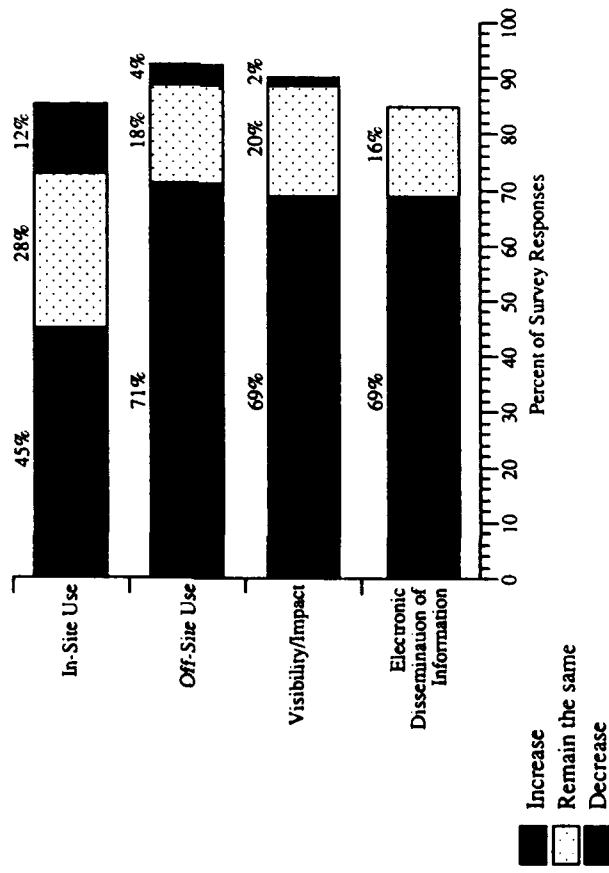
## 14 Benchmarked Libraries

What trends do you see in corporate libraries through 1994 in terms of staffing, budgets, computer applications, library size, and general impact on the operations of the corporation?



## USACE Library Survey 1991

What trends do you see in Corps libraries through 1994 in terms of staffing, budgets, computer applications, library size, and general impact on the operations of the Corps?



## Appendix II

The following members of the Staff of the USACE were interviewed as a part of this study. They are listed in alphabetical order.

|                       |                                                              |
|-----------------------|--------------------------------------------------------------|
| Betty Allen           | Southwestern Division                                        |
| Lois Carey            | Humphreys Engineer Center Support Activity, Kingman Building |
| James Dorsey          | Humphreys Engineer Center Support Activity, Pulaski Building |
| Nancy Liston          | Cold Regions Research and Engineering Laboratory             |
| Sarah Mikel           | HQUSACE                                                      |
| Carol McMillin        | Waterways Experiment Station                                 |
| Sherrie Moran         | Lower Mississippi Valley Division                            |
| Dr. N. Radhakrishnan  | Waterways Experiment Station                                 |
| George H. Rhodes, Jr. | Lower Mississippi Valley                                     |
| A. J. Roberto, Jr.    | Cold Regions Research and Engineering Laboratory             |
| Vicki Sharp           | Fort Worth District                                          |
| Mildred Stiger        | Engineer Topographic Laboratory                              |
| Jo An Stolley         | HQUSACE                                                      |
| James Waller          | Wilmington District                                          |

In addition, one contracted staff member was interviewed.

|                     |                     |
|---------------------|---------------------|
| Betty Sue Westbrook | Wilmington District |
|---------------------|---------------------|

### Appendix III

These sources are referred to in this report:

Corporate Library Excellence, by James M. Matarazzo.  
Washington, D. C.: Special Libraries Association, 1990.

The Corporation in the 1990's, ed. by Michael S. Scott Morton.  
New York: Oxford University Press, 1991.

Ideas and Information, by Arno Penzias. Norton, 1989.

U. S. Army Corps of Engineers. USACE Library Program Annual Report [FY 1990].

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